Inter - Diffusion Generation Model of Speakers and Listeners for Effective Communication

Jinhe Huang* 19217124@njau.edu.cn Nanjing Agriculture University China

Gaoge Han hangaoge@nwafu.edu.cn City University of Hong Kong China Yongkang Cheng*† 19217105@njau.edu.cn Nanjing Agriculture University China

Jinwei Li lijinwei231@mails.ucas.ac.cn University of Chinese Academy of Science Minghang Yu*
1431605505@qq.com
Northwest A&F University
China

Jing Zhang m17863974365@163.com University of Chinese Academy of Sciences China

Shilei Wang shileiwang@mail.nwpu.edu.cn Northwestern Polytechnical University China

Abstract

Full-body gestures play a pivotal role in natural interactions and are crucial for achieving effective communication. Nevertheless, most existing studies primarily focus on the gesture generation of speakers, overlooking the vital role of listeners in the interaction process and failing to fully explore the dynamic interaction between them. This paper innovatively proposes an Inter-Diffusion Generation Model of Speakers and Listeners for Effective Communication. For the first time, we integrate the full-body gestures of listeners into the generation framework. By devising a novel inter-diffusion mechanism. this model can accurately capture the complex interaction patterns between speakers and listeners during communication. In the model construction process, based on the advanced diffusion model architecture, we innovatively introduce interaction conditions and the GAN model to increase the denoising step size. As a result, when generating gesture sequences, the model can not only dynamically generate based on the speaker's speech information but also respond in realtime to

"opposit contribution:

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ICMR '25, June 30-July 3, 2025, Chicago, IL, USA

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ACM ISBN 979-8-8007-1877-9/2025/06...\$15.00 https://doi.org/10.1145/3731715.3733366 Xingjian Gu ³ guxingjian@njau.edu.cn Nanjing Agriculture University China

the listener's feedback, enabling synergistic interaction between the two. Abundant experimental results demonstrate that compared with the current state-of-the-art gesture generation methods, the model we proposed has achieved remarkable improvements in the naturalness, coherence, and speech-gesture synchronization of the generated gestures. In the subjective evaluation experiments, users highly praised the generated interaction scenarios, believing that they are closer to real life human communication situations. Objective index evaluations also show that our model outperforms the baseline methods in multiple key indicators, providing more powerful support for effective communication.

Keywords: Gesture Generation; Diffusion Model

ACM Reference Format:

Jinhe Huang, Yongkang Cheng, Minghang Yu*, Gaoge Han, Jin-wei Li, Jing Zhang, Shilei Wang, and Xingjian Gu. 2025. Inter-Diffusion Generation Model of Speakers and Listeners for Effective Communication. In Proceedings of the 2025 International Conference on Multimedia Retrieval (ICMR '25), June 30-July J, 2025. Chicago, H. USA. ACM, New York, NY, USA, 9 pages, https://doi.org/10.1145/3731715.3733366

1 Introduction

In the vast and evolving landscape of human communication research, the generation of natural looking body gestures has been a long standing and challenging pursuit, particularly in the burgeoning fields of virtual reality, gaming, and filmmaking. These non-verbal cues are far more than just supplementary elements; they are the lifeblood of immersive and realistic interactions. By seamlessly integrating with spoken language, body gestures can convey a wealth of information, including emotions, attitudes, and intentions, thereby enriching the overall communication experience.

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Speakers The Role Of Listeners

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Speakers The Role Of Listeners:

Speakers, Listeners and Communication Gillian Brown, 1995 In this book Gillian Brown draws on a wide range of examples of discourse analysis to explore the ways in which speakers and listeners use language collaboratively to talk about what they can see in front of them and about a series of events She examines the conditions under which communication is successful and the conditions under which it sometimes fails The focus of her attention is upon the listener s role as the listener tries to make sense of what the speaker says in a highly constrained context her cognitive pragmatic approach to discourse analysis both complements and challenges the sociological anthropological perspectives on the subject which currently predominate Gillian Brown is co author of the well known textbook Discourse Analysis Cambridge University Press The Handbook of Listening Debra L. Worthington, Graham D. Bodie, 2020-06-26 A unique academic reference 1983 dedicated to listening featuring current research from leading scholars in the field The Handbook of Listening is the first cross disciplinary academic reference on the subject gathering the current body of scholarship on listening in one comprehensive volume This landmark work brings together current and emerging research from across disciples to provide a broad overview of foundational concepts methods and theoretical issues central to the study of listening The Handbook offers diverse perspectives on listening from researchers and practitioners in fields including architecture linguistics philosophy audiology psychology and interpersonal communication Detailed yet accessible chapters help readers understand how listening is conceptualized and analyzed in various disciplines review the listening research of current scholars and identify contemporary research trends and areas for future study Organized into five parts the Handbook begins by describing different methods for studying listening and examining the disciplinary foundations of the field Chapters focus on teaching listening in different educational settings and discuss listening in a range of contexts Filling a significant gap in listening literature this book Highlights the multidisciplinary nature of listening theory and research Features original chapters written by a team of international scholars and practitioners Provides concise summaries of current listening research and new work in the field Explores interpretive physiological phenomenological and empirical approaches to the study of listening Discusses emerging perspectives on topics including performative listening and augmented reality An important contribution to listening research and scholarship The Handbook of Listening is an essential resource for students academics and practitioners in the field of listening particularly communication studies as well as those involved in linguistics language acquisition and psychology Variability in language predictions: Assessing the influence of speaker, text and experimental method Franziska Kretzschmar, Martine Grice, Phillip M. Alday, Roel M. Willems, Ingmar Brilmayer, 2023-06-14 The Routledge Handbook of Public Speaking Research and Theory Stevie M. Munz, Tim McKenna-Buchanan, Anna M. Wright, 2024-04-18 Providing a comprehensive survey of the empirical research theory and history of public speaking this handbook fills a crucial gap in public speaking pedagogy resources and provides a foundation for future research and

pedagogical development Bringing together contributions from both up and coming and senior scholars in the field this book offers a thorough examination of public speaking guided by research across six key themes the history of public speaking the foundations of public speaking issues of diversity equity and inclusion considerations of public speaking across contexts assessment of public speaking and the future of public speaking in the twenty first century The evidence based chapters engage with a broad discussion of public speaking through a variety of viewpoints to demonstrate how subtopics are connected and fraught with complexity Contributors explore public speaking in education business and professional settings and political contexts and outline how skills learned through public speaking are applicable to interpersonal small group and business interactions Reinforcing the relevance importance and significance of public speaking in individual interpersonal social and cultural communication contexts this accessibly written handbook will be an indispensable resource for public speaking instructors and program administrators It will also be valuable reading for Communication Pedagogy and Introduction to Graduate Studies courses The Routledge Handbook of Second Language Acquisition and Listening Elvis Wagner, Aaron Olaf Batty, Evelina Galaczi, 2024-07-29 The Routledge Handbook of Second Language Acquisition and Listening offers a state of the art systematic discussion of the role of listening in second language acquisition SLA and use This handbook positions listening not just as a receptive comprehension skill but also as an integral part of interaction a vital component in the process of language acquisition and a skill which needs attention in its own right World leading international scholars synthesize and contextualize the salient theoretical approaches methodological issues empirical findings practical applications and emerging themes in L2 listening development and processing They illustrate the role that L2 listening ability plays in understanding SLA and interactional competence and set the future research agenda to move the field forward This volume is an indispensable resource to students scholars and practitioners from the fields of SLA cognitive psychology language teaching and assessment as well as those interested in pronunciation speaking and oral communication

Emotional Intelligence Training Karl Mulle,2016-08-29 When it comes to reaching peak performance emotional intelligence is key Research shows that emotional intelligence is more important to performance than ability and technical skill combined But is EI a skill that can be developed in others Absolutely Trainer Karl Mulle has developed a collection of complete workshops and tools you ll need to conduct effective two day one day and half day emotional intelligence workshop programs Free tools and customization options The free ready to use resources PDF that accompany this book include downloadable presentation materials agendas handouts assessments and tools All workshop program materials including MS Office PowerPoint presentations and MS Word handouts may be customized for an additional licensing fee Browse the licensing options in the Custom Material License pricing menu About the Series The ATD Workshop Series is written for trainers by trainers because no one knows workshops as well as the practitioners who have done it all Each publication weaves in today s technology and accessibility considerations and provides a wealth of new content that can be used to

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